



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0387; Project Identifier AD-2021-01225-R]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Inc., Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Bell Textron Inc., Model 212, 412, 412CF, and 412EP helicopters. This proposed AD was prompted by a report of a cracked check valve. This proposed AD would require inspecting certain engine oil and fuel check valves, and depending on the results, repetitively inspecting and removing the check valve from service. This proposed AD would also prohibit installing affected engine oil and fuel check valves on any helicopter. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bell Textron, Inc., P.O. Box 482, Fort Worth, TX 76101; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-

450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0387; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Kuethe Harmon, Safety Management Program Manager, Certification & Program Management Section, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5198; email kuethe.harmon@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0387; Project Identifier AD-2021-01225-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Kuethe Harmon, Safety Management Program Manager, Certification & Program Management Section, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5198; email kuethe.harmon@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA proposes to adopt a new AD for Bell Textron Inc., Model 212, 412, 412CF, and 412EP helicopters with an engine oil check valve part number (P/N) 209-062-520-001 or fuel check valve P/N 209-062-607-001 manufactured by Circor Aerospace that is marked "Circle Seal" and "CORONA CA," and has a manufacturing date code of, or prior to, "9/11" (September 2011), or does not have a manufacturing date code, installed. This proposed AD would not apply to check valves marked with "TQL." This proposed AD was prompted by a report of a cracked check valve manufactured in 2009 by Circor Aerospace. An incorrect torque value applied on the threaded fitting at the check valve inlet end during the assembly process resulted in the crack. Indication of this condition may also include an enlarged outside diameter (O.D.) measurement of the check valve housing at the inlet end where the threaded fitting is installed or a leak. These check valves may be installed as engine oil check valve P/N 209-062-520-001 and fuel check valve P/N 209-062-607-001 on Bell Textron Inc., Model 212, 412, 412CF, and 412EP helicopters.

The FAA previously issued AD 2019-09-02, Amendment 39-19636 (84 FR 22695, May 20, 2019), which applies to the same model helicopters with the same part-numbered check valves installed, except it is only for check valves marked “Circle Seal” and with a manufacturing date code of “10/11” (October 2011) through “03/15” (March 2015).

This condition, if not addressed, could result in loss of lubrication or fuel to the engine, failure of the engine or a fire, and subsequent loss of control of the helicopter.

FAA’s Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type designs.

Related Service Information

The FAA reviewed Bell Alert Service Bulletin (ASB) 212-20-163, Revision B, dated April 6, 2021 (ASB 212-20-163), Bell ASB 212-20-164, Revision B, dated April 6, 2021 (ASB 212-20-164), Bell ASB 412-20-182, Revision B, dated April 6, 2021 (ASB 412-20-182), and Bell ASB 412-20-183, Revision C, dated April 6, 2021 (ASB 412-20-183). ASB 212-20-163 and ASB 412-20-182 specify procedures for inspecting and replacing engine oil check valve P/N 209-062-520-001. ASB 212-20-164 and ASB 412-20-183 specify procedures for inspecting and replacing fuel check valve P/N 209-062-607-001.

Proposed AD Requirements in this NPRM

This proposed AD would require measuring the O.D. of an affected (engine oil or fuel) check valve housing at the center and at the inlet end where the threaded fitting is installed. If the dimension measured at the inlet end is greater than 0.003 inch (0.0762 mm) compared to the measurement at the center, this proposed AD would require repetitively inspecting the check valve for a crack and leak, and depending on the results, removing the check valve from service. This proposed AD would also require removing the check valve from service at a longer compliance time, which would terminate the repetitive inspections. Lastly, this proposed AD would prohibit installing affected check valves on any helicopter.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 169 helicopters of U.S. registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this proposed AD.

Measuring up to four check valves (two engine oil and two fuel) would take up to about 1 work-hour for an estimated cost of up to \$85 per helicopter and \$14,365 for the U.S. fleet. Inspecting up to four check valves (two engine oil and two fuel) would take up to about 2 work-hours for an estimated cost of up to \$170 per helicopter and \$28,730 for the U.S. fleet, per inspection cycle as applicable. Replacing up to four valves (two engine oil and two fuel) would take up to about 4 work-hours and parts would cost up to about \$340, for an estimated cost of up to \$680 per helicopter and \$114,920 for the U.S. fleet.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Bell Textron Inc.: Docket No. FAA-2022-0387; Project Identifier AD-2021-01225-R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bell Textron Inc., Model 212, 412, 412CF, and 412EP helicopters, certificated in any category, with an engine oil check valve part number (P/N) 209-062-520-001 or fuel check valve P/N 209-062-607-001 manufactured by Circor Aerospace that:

- (1) Is marked “Circle Seal” and “CORONA CA,” except not a check valve marked with “TQL,” and
- (2) Has a manufacturing date code of, or prior to, “9/11” (September 2011), or does not have a manufacturing date code, installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 2800 Aircraft Fuel System and 7900 Engine Oil System (Airframe).

(e) Unsafe Condition

This AD was prompted by a report of a cracked check valve. The FAA is issuing this AD to detect a cracked check valve. The unsafe condition, if not addressed, could result in loss of lubrication or fuel to the engine, failure of the engine or a fire, and subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 25 hours time-in-service (TIS) or 30 days, whichever occurs first after the effective date of this AD, using a caliper or equivalent, measure the outside diameter (O.D.) of the check valve housing at the center, and the O.D. of the check valve housing at the inlet end where the threaded fitting is installed. If the dimension measured at the inlet end is greater than 0.003 inch (0.0762 mm) compared to the measurement at the center, do the following:

(i) Before further flight, and thereafter at intervals not to exceed 25 hours TIS or 30 days, whichever occurs first, using a flashlight, visually inspect the check valve for a crack and leak, paying particular attention to the area at the inlet end where the threaded fitting is installed. If there is a crack or leak, before further flight, remove the check valve from service. Removing the check valve from service terminates the repetitive inspections required by this AD for that check valve.

(ii) Within 600 hours TIS or 12 months, whichever occurs first, remove the check valve from service. Removing the check valve from service terminates the repetitive inspections required by this AD for that check valve.

(2) As of the effective date of this AD, do not install an engine oil or fuel check

valve identified in paragraph (c) of this AD on any helicopter.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, DSCO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i) of this AD. Information may be emailed to: 9-ASW-190-COS@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

For more information about this AD, contact Kuethe Harmon, Safety Management Program Manager, Certification & Program Management Section, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5198; email kuethe.harmon@faa.gov.

Issued on March 25, 2022.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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